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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,906	12/26/2001	Jong Jin Park	8733.527.00	7495

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WASHINGTON, DC 20006

EXAMINER
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PATEL, NITIN

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/025,906

**Applicant(s)**

PARK ET AL.

**Examiner**

Nitin Patel

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 19 is/are allowed.
- 6) ☒ Claim(s) 12-14 is/are rejected.
- 7) ☐ Claim(s) 15-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. Claims 1-11,19 are allowed.
2. The prior art fails to teach or suggest a method of driving a liquid crystal display having a sequentially supplying a first scanning signal to consecutive ones of a plurality of gates lines; sequentially supplying a second scanning signal to consecutive ones of the plurality of gate lines, wherein at least one gate line is between a gate line supplied with the first scanning signal and a gate line supplied with the second scanning signal and supplying data synchronized with the first scanning signal and the second scanning signal to a plurality of data lines crossing with the plurality of gate lines as claimed in claim 1.

The prior art fails to teach or suggest a liquid crystal display having a plurality of gate lines in the liquid crystal display panel; a plurality of data lines crossing with the plurality of gate lines; a gate driver sequentially scanning the plurality of gate lines, the scanning including sequentially supplying a first scanning signal and a second scanning signal to non adjacent ones of the plurality of gate lines; scanning signal supplier supplying the first scanning signal and the second scanning signal to the gate driver and a data driver supplying data to the plurality of data lines wherein the supplied data is synchronized with the first scanning signal and the second scanning signal as claimed in claim 5.

The prior art fails to teach or suggest a method of driving a liquid crystal display having sequentially supplying first and second scanning signals to a plurality of consecutively arranged gate lines in a liquid crystal panel having a plurality of liquid

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crystal cells arranged in a matrix, wherein at least one gate line is between a gate line supplied with the first scanning signal and a gate line supplied with the second scanning signal and supplying data signal to a plurality of data lines wherein the data signals are synchronized with the first and second scanning signals and wherein the data lines intersect the gate lines as claimed in claim 19.

***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 12,13 is rejected under 35 U.S.C. 102(e) as being anticipated by Sakamoto et al., (U.S. Patent No. 6,515,647).

As per claim 12 Sakamoto shows a method of driving a liquid crystal display having a liquid crystal display cells arranged in a matrix (In Fig.2) and In col.; forming a plurality of gate lines and data line (In Fig.2 x and y drivers); providing a scanning signal supplier supplying first and second scanning signals to a gate driver, the gate driver sequentially scanning the gate lines (In Fig.2 element 113), the scanning including sequentially supplying the first and second scanning signal to non adjacent ones of the gate lines and supplying data to the plurality of data lines wherein the supplied data is synchronized with the first and second scanning signals(In col.8 lines 15-67 and In col.9 lines 1-67).

As per claim 13, Sakamoto shows alternately supplying first and second scanning signals to gate lines (In col.8 lines 54-65).

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***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al., (U.S. Patent No. 6,515,647) in view of Taniguchi et al., (U.S. Patent No. 6,573,879).

Sakamoto does not specifically show data driver supplying black data signal to data line and using a supply a picture data signal when second scanning signal is supplied to selected gate line, wherein at least one gate line is provided between selected gate line and gate line to which the first scanning signal is supplied.

Taniguchi shows data driver supplying black data signal to data line and using a supply a picture data signal (In fig.9, 10) when second scanning signal is supplied to selected gate line, wherein at least one gate line is provided between selected gate line and gate line to which the first scanning signal is supplied (In col.8 lines 57-67 and Col.9 lines 1-50 and col.10 lines 18-30). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Taniguchi's into display device of Sakamoto's because it would have provided a fast response speed and an excellent viewing angle characteristic.

***Allowable Subject Matter***

5. Claims 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments with respect to claims 12-18 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 703-308-7024. The examiner can normally be reached on 8:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP  
July 25, 2004

  
Amare Mengistu  
Primary Examiner

~~Amare Mengistu~~  
~~Primary Examiner~~